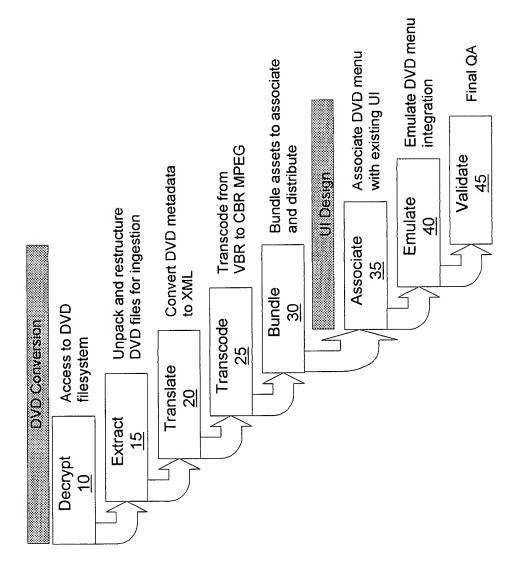
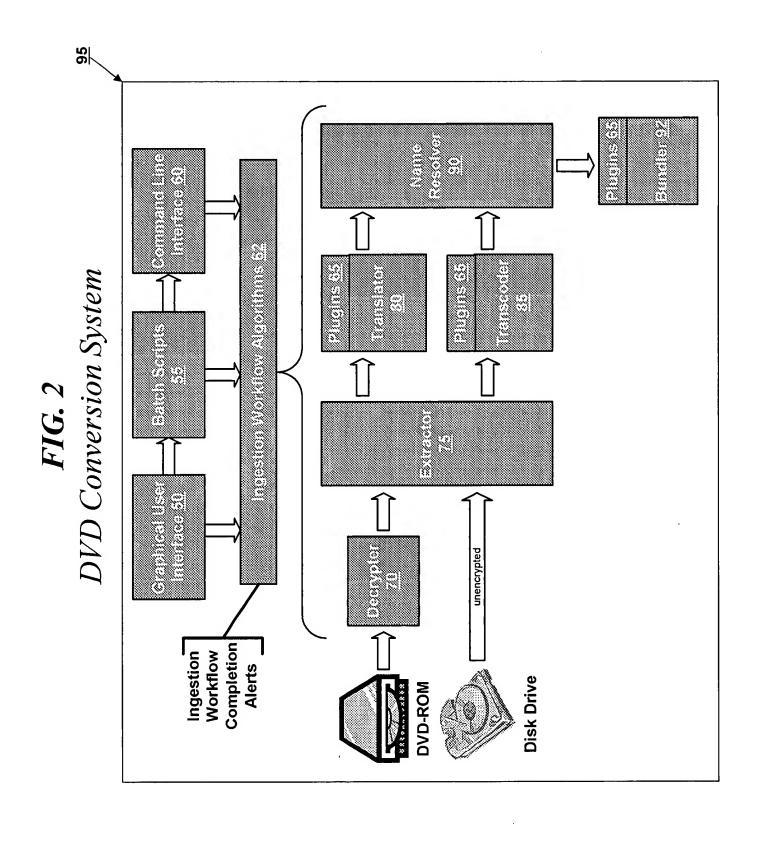
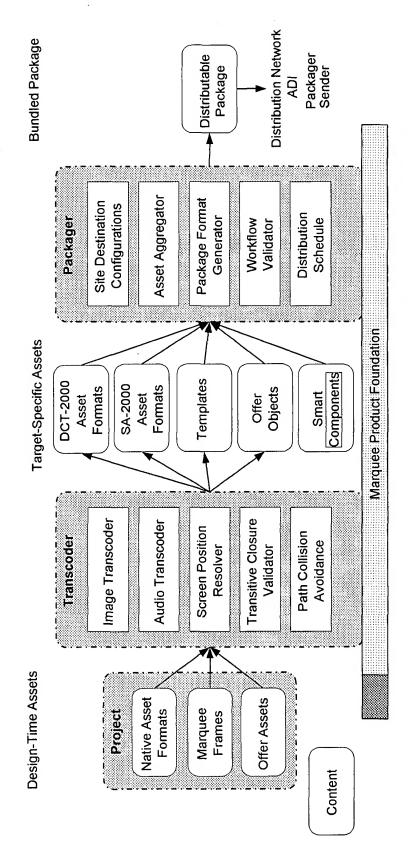
FIG. 1
DVD Ingestion Process





PRESENTATION DEVICE 195 PRESENTATION DEVICE 195 PRESENTATION DEVICE 195 STB 190 STB 190 STB 190 MABRIE NAOWTBN ATAG JATIBIG VOD SERVER/ SYSTEM 160 VOD SERVER/ SYSTEM 160 DVD On Demand System Network Operator(s) Application Server Subnet Headend 170 Run Time Tools Network Operator(s) Content Provider(s) Design Time Tools Ì **♦** Ad Provider(s) 101

FIG. 4 UI Designer Packager Workflow



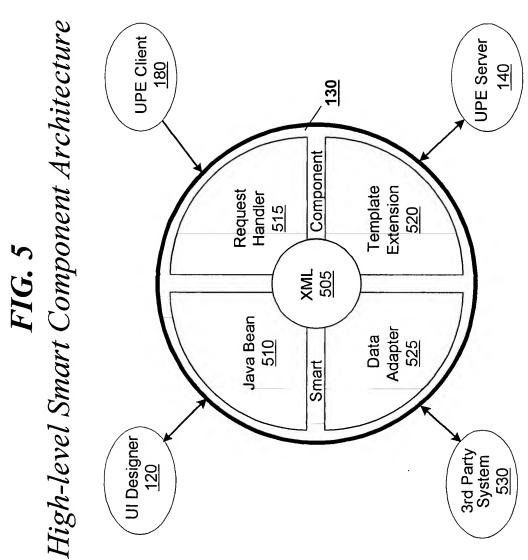


FIG. 6A MPEG Background

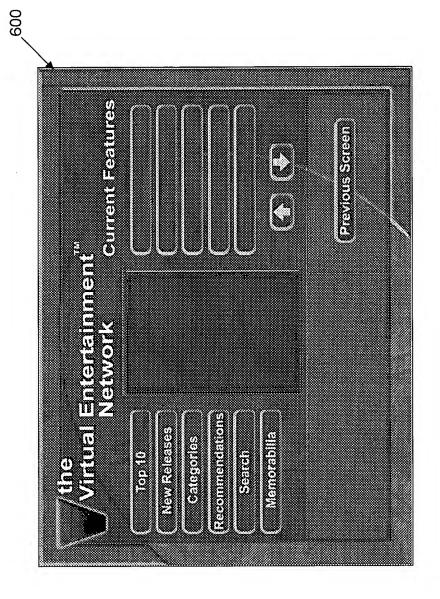


FIG. 6B Graphic Overlay

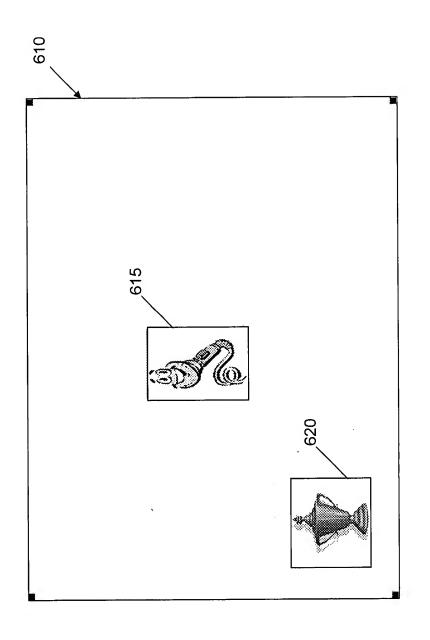


FIG. 6C Text Overlay

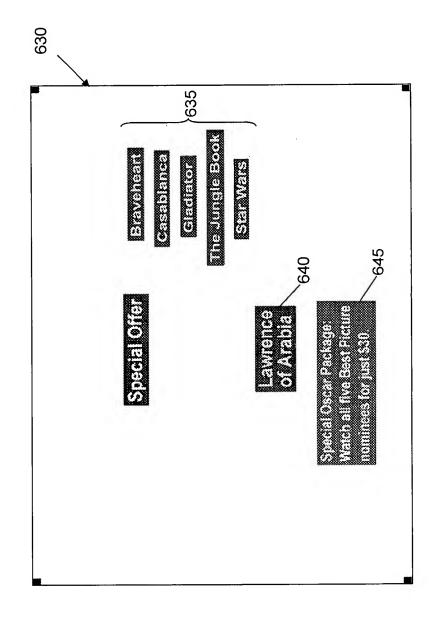


FIG. 6D Hot Spot Highlight

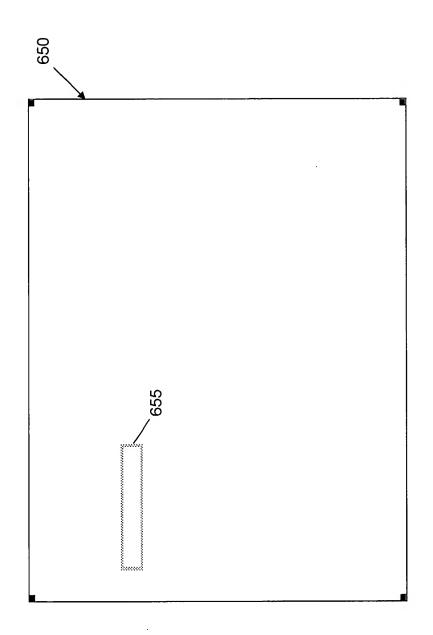
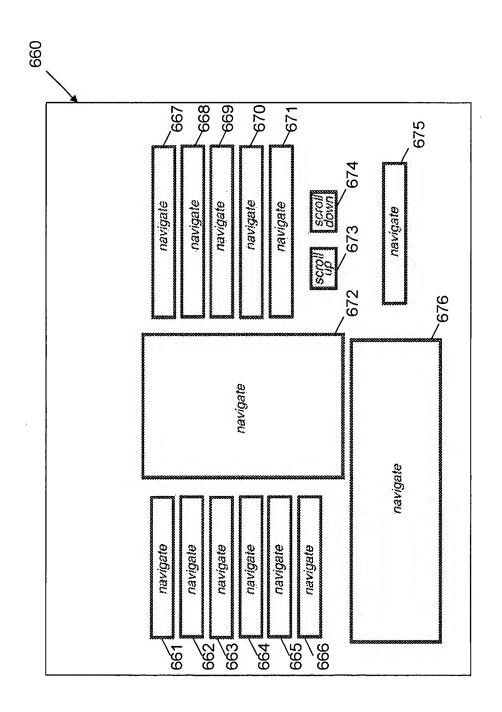


FIG. 6E Hot Spot Map



099

FIG. 6F Hot Spot Map Superimposed On-Screen

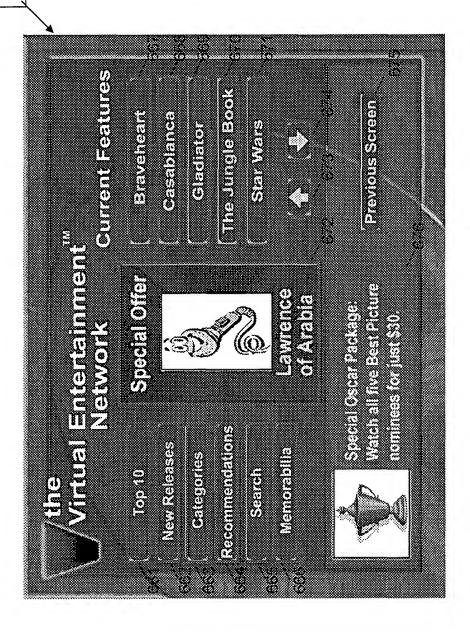
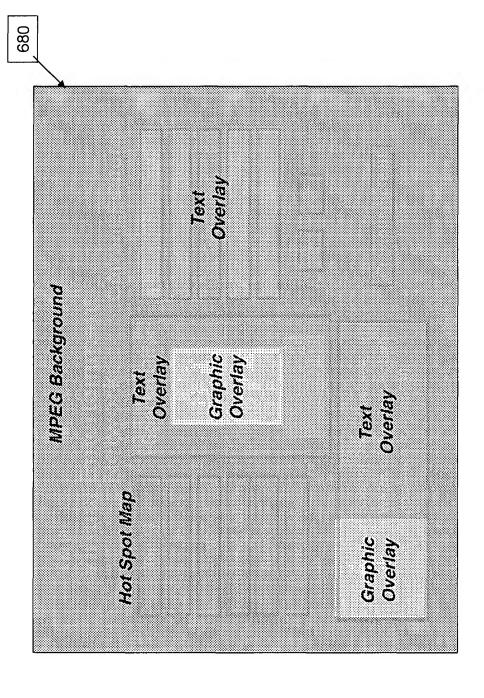
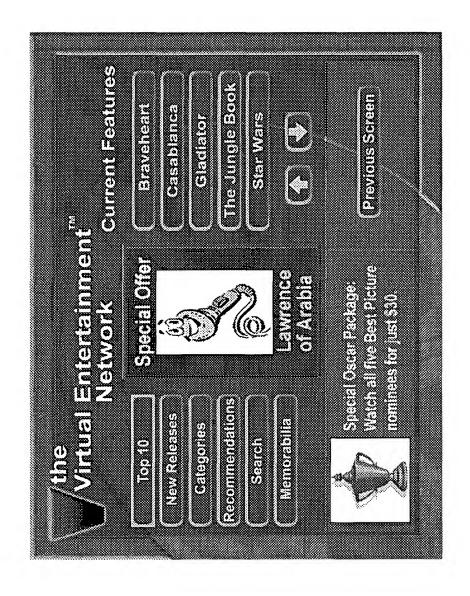


FIG. 6G Screen Template



/ / / / /

FIG. 6H Visual Layer Composite



Exemplary

Screen Shots

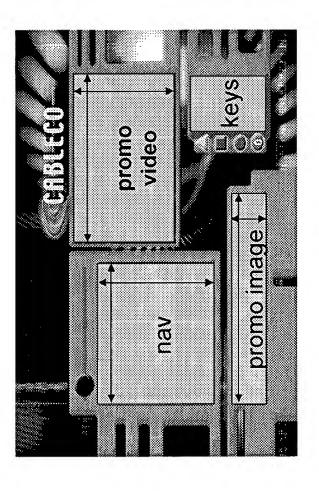


FIG. 74

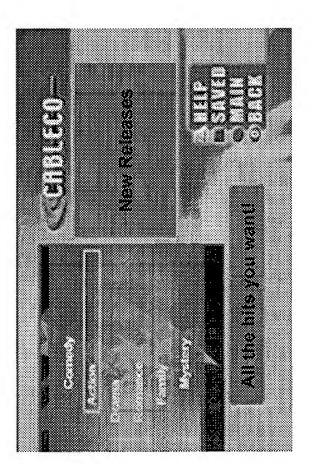


FIG. 7B

Exemplary

Screen Shots



FIG. 84

Cool Notice and the second sec

810

FIG. 8B

Exemplary Screen Shots

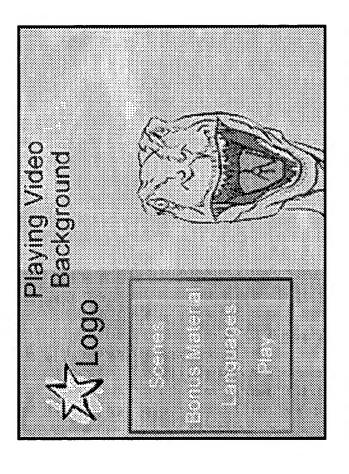


FIG. 8C

Chapter Chapte

FIG. 8D

Exemplary

Screen Shots

FIG. 8E

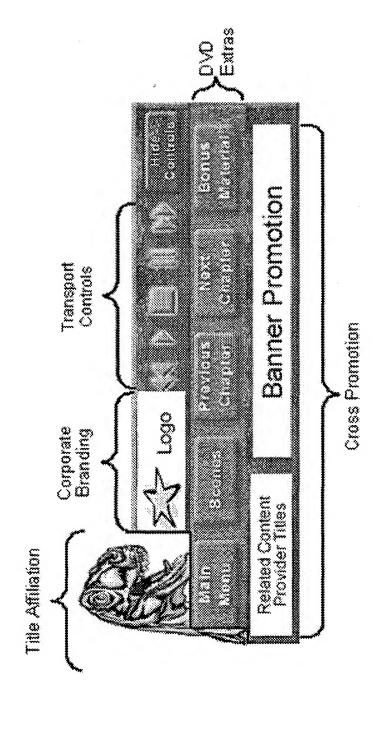
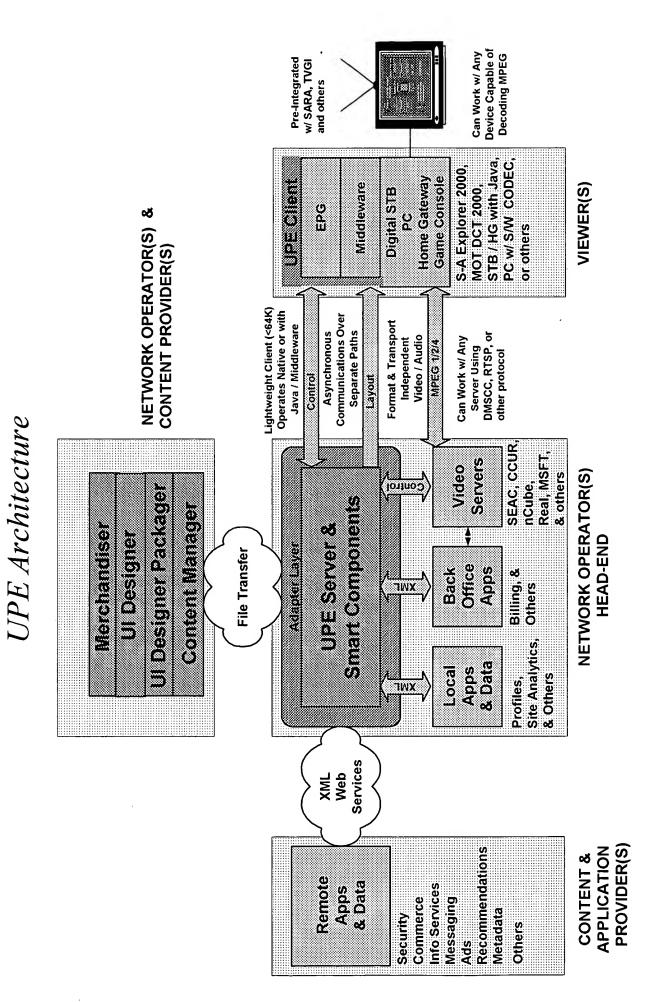


FIG. 9



UPE Clients Components User-defined Widgets for widgets VOD Server is asynchronous binary screen data Request XML Request Handler 0 Admin Request Handler Widget Request Handler Adapters 00/ QOA Pause, Play, etc. FIG. 10
UPE Internals Architecture Response (XML) **User Defined** Request Handlers Other Template Engine (Future) Response Pusher Response (XML) Worker Threads Translator Binary Template Extensions for Smart Components Request Handler Screen Request Factory Handler Motorola STB Server Session Request Handler Worker Threads Session Manager Context Builder Request (XML) Template Engine User defined Context Builder Request (XML) ▼ SA STB Server Request Handler Template Objects Resource Collection Resource User Defined 10 Layer Rednest (XML) Push Service APIs Admin Adapter FileSystem External Data Templates, Images, etc.) Marquee Product Spine

FIG. 11
Merchandiser Architecture

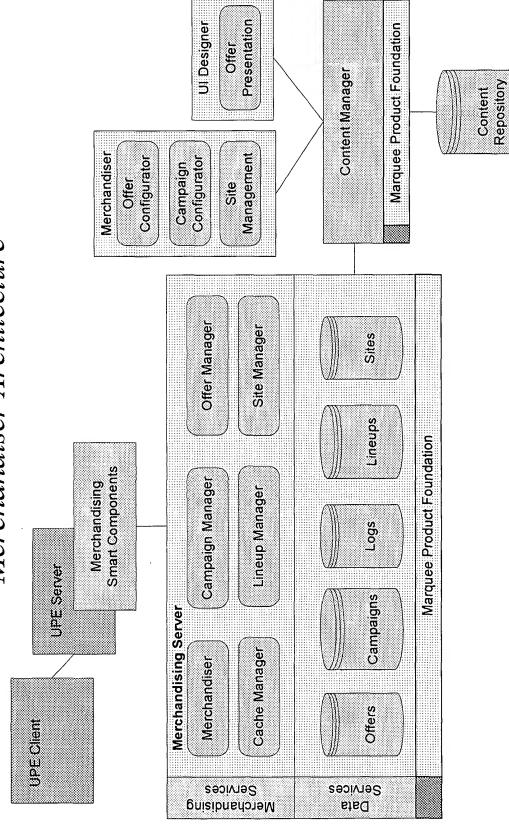
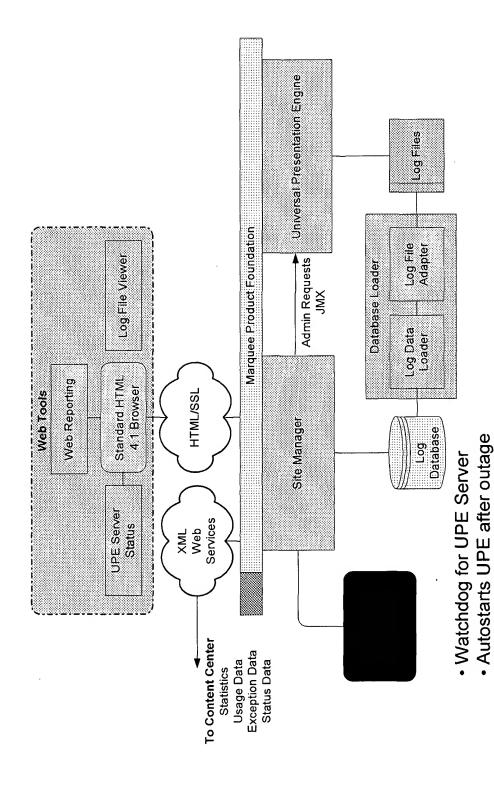
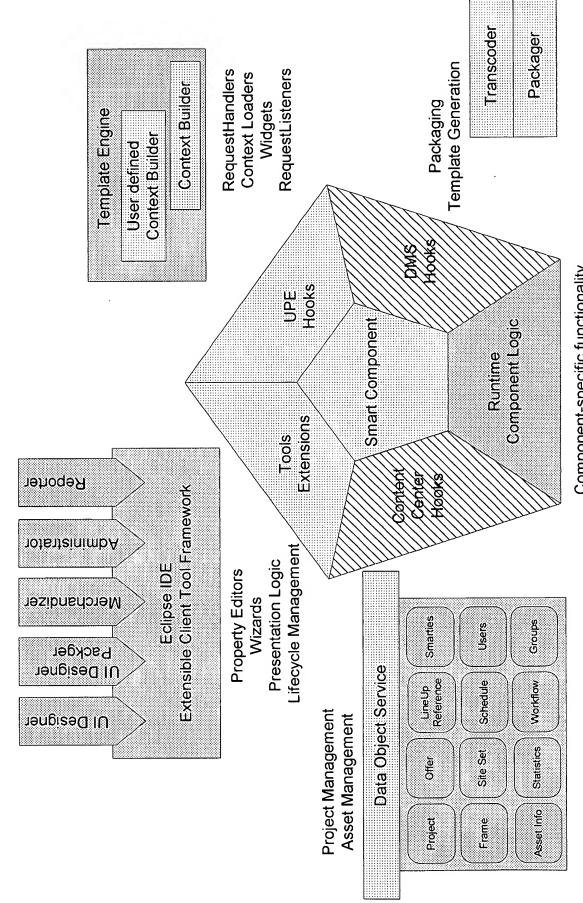


FIG. 12 Site Manager Architecture



System Administrator Alerts

Detailed Smart Component Architecture FIG. 13



Component-specific functionality

FIG. 14
SeaChange VOD Adapter / Smart Component

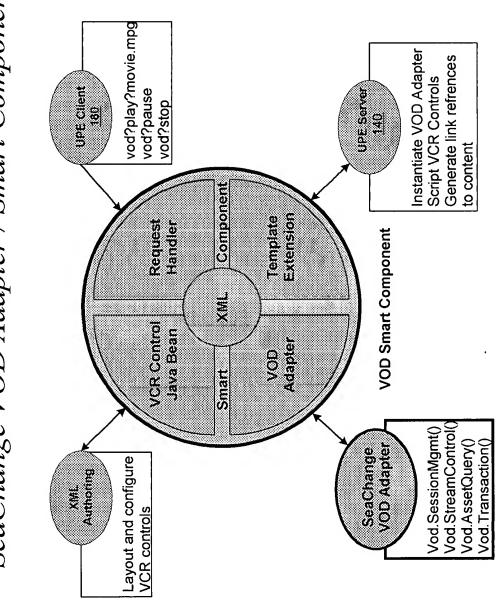
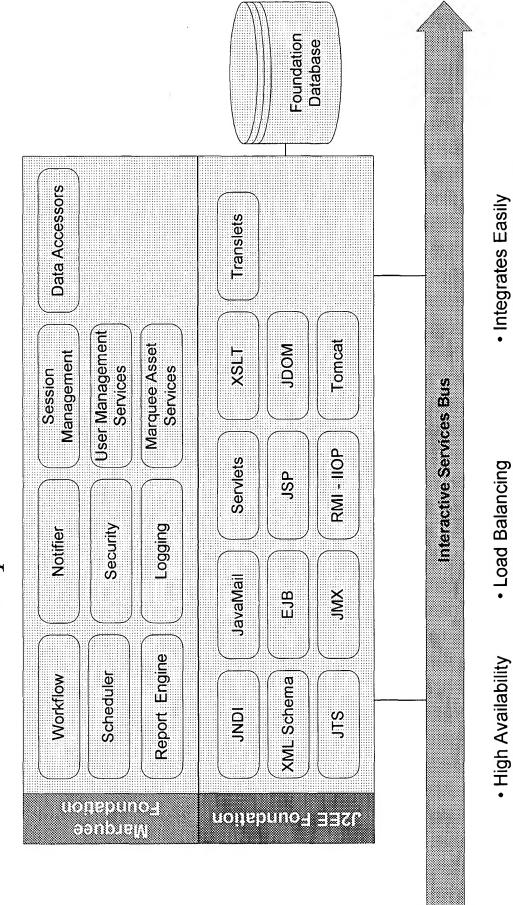


FIG. 15
Marquee Product Foundation



Large Support Community

Multiple Vendors

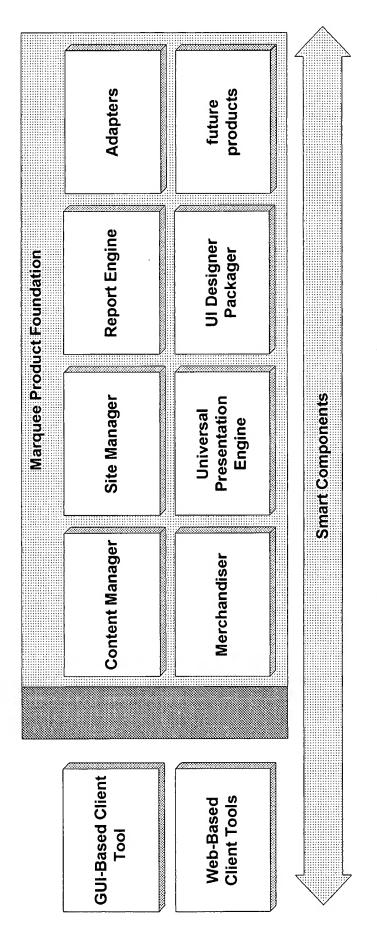
Rich Standard Services

Easily Extended

TransactionalMulti-Tiered

FIG. 16

Smart Components Extensibility Across Products



- Marquee Product Foundation provides base functionality
 - · Applications are built on top of the foundation
- Smart Component Framework provides extensibility

FIG. 17
Content Center Tools and Architecture

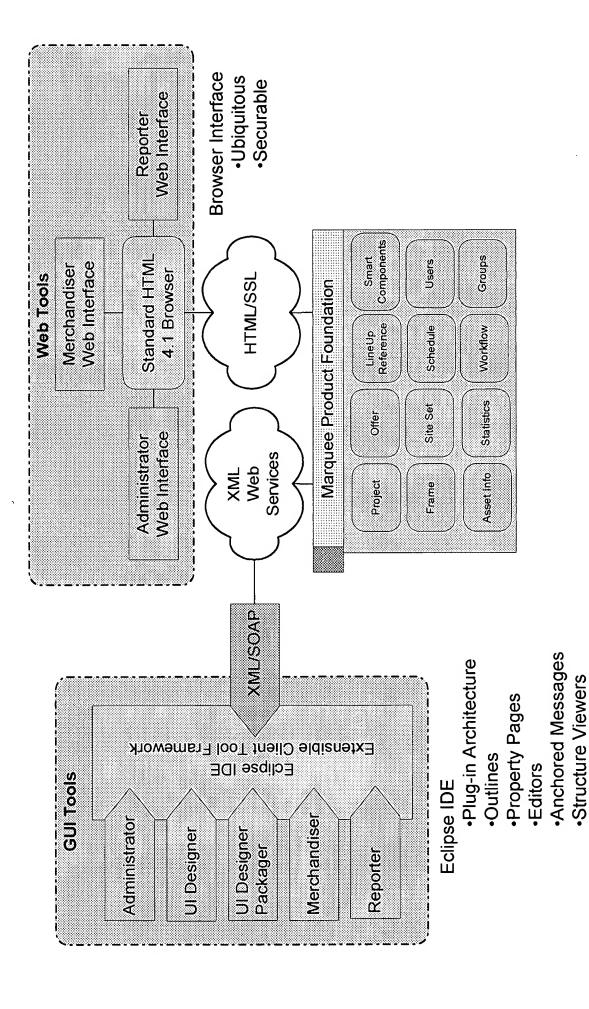


FIG. 18 UPE Client Architecture

